

a water jet cutter [cutting apparatus] mounted to the first carriage and having a nozzle positioned for cutting into the web as the first carriage moves along the beam;

a flexible water supply conduit connected to said water jet cutter [cutting apparatus] to supply pressurized water to the water jet nozzle;

first drive means for driving the first carriage along the beam;

a second carriage mounted to the beam and moveable along the beam;

a wheel rotatably mounted on the second carriage for movement therewith along the beam, the wheel adapted to have the flexible water supply conduit guided and stretched thereabout, the wheel supporting the flexible water supply conduit as the second carriage moves along the beam; and,

second drive means for driving the second carriage along the beam, the second drive means being interdependent with the first drive means to move the second carriage along the beam at second speeds that are relative to [the] first speeds at which the first drive means moves the first carriage along the beam.

2. (Amended) The water jet cutting apparatus of claim 1 wherein the beam has a second width and wherein the first drive means moves the first carriage across the second width of the beam at the first speeds that are twice the second speeds at which the second drive means moves the second carriage along the beam.

4. (Amended) The water jet cutting apparatus of claim 1 wherein: the first drive means includes a first movable belt extending around the beam, the first carriage being attached to the first movable belt;

a pair of first drive transmission pulleys mounted at [the] opposing ends of the beam around which the first movable belt is driven, and the first drive pulleys each having a first circumference;

the second drive means includes a second movable belt extending around the beam adjacent the first movable belt, the second carriage being attached to the second movable belt;

a pair of second drive transmission pulleys mounted at the opposing ends of the beam around which the second movable belt is driven, and the second drive pulleys each having a second circumference that is  $\frac{1}{2}$  the first circumference of each of the first drive pulleys; and,

a drive motor mounted to at least one of the opposing ends of the beam to drive a corresponding one of the first and second pulleys.

5. (Amended) The water jet cutting apparatus of claim 4 wherein each of the first and second pulleys [are toothed sprockets] located at each opposing end of the beam [and] are driven by a single drive shaft[, and the first and second movable belts are timing belts].

6. (Amended) The water jet cutting apparatus of claim 5 wherein the first and second [sprockets] pulleys located at each opposing end of the beam are initially rotatable relative to each other for initial adjustments and are locked in place relative to each other during operation.

7. (Amended) The water jet cutting apparatus of claim 1 wherein the flexible water supply conduit has a first end connected to said cutter [cutting apparatus] and has a second end connected to a water supply fitting located adjacent an end of the beam, the water supply fitting having a spring

*a3* clamp to compensate for hose shrinkage while maintaining a nominal tension on the hose.

*a4* 9.10. (Amended) A water jet cutting apparatus for cutting a turn-up tip in a web, having a width, of a papermaking machine, the apparatus comprising:

a beam extending transversely across the width of the web;

first and second carriage sets mounted on opposing sides of the beam for movement along the beam in opposite transverse directions;

each of the first and second carriage sets having a faster moving carriage and a slower moving carriage;

a water jet cutter [cutting apparatus] mounted to the faster moving carriage of each of the first and second carriage sets, the water jet cutter [cutting apparatus] each having a water jet nozzle positioned for cutting into the web as the respective faster moving carriage moves along the beam;

flexible water supply conduits connected to the water jet cutter [cutting apparatus] to supply pressurized water to corresponding ones of the water jet nozzles;

hose carrying wheels mounted for rotation to each of the slower moving carriages for movement therewith along the beam, each of the hose wheels having one of the water supply conduits guided and stretched thereabout, each of the hose wheels supporting the one water supply conduits as its slower moving carriage moves along the beam;

first drive means for driving the faster moving carriages along the beam in opposing transverse directions to each other; and,

second drive means for driving the slower moving carriages along the beam in opposing transverse directions to each other, the second drive means

being interdependent with the first drive means to move the slower moving carriages along the beam at second speeds that are relative to [the] first speeds at which the first drive means moves the faster moving carriage along the beam.

*ad added*  
 11. (Amended) The water jet cutting apparatus of claim 10 wherein the first drive means moves the faster moving carriage across [the width of] the beam at the first speeds that are twice the second speeds that the second drive means moves the slower moving carriage across the beam.

*Set 11*  
 12. (Amended) The water jet cutting apparatus of claim 10 wherein:  
 the first drive means includes a first movable belt extending around the beam, the faster moving carriage being attached to the first movable belt;  
 a pair of first transmission pulleys mounted at [the] opposing ends of the beam around which the first movable belt is driven, and the first drive pulleys each having a first circumference;

the second drive means includes a second movable belt extending around the beam adjacent the first movable belt, the slower moving carriage being attached to the second movable belt;

a pair of second transmission pulleys mounted at the opposing ends of the beam around which the second movable belt is driven, and the second drive pulleys each having a second circumference that is  $\frac{1}{2}$  that of the first [the] circumference of each of the first drive pulleys; and,

a drive motor mounted to at least one of the opposing ends of the beam to drive a corresponding one of the first and second pulleys.

*a 5*  
 13. (Amended) The water jet cutting apparatus of claim 13 wherein each of the first and second pulleys [are toothed sprockets] located at each

*a5*  
*amended*  
opposing end of the beam are driven by a single drive shaft[, and the first and second movable belts are timing belts].

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*a6*  
1916. (Amended) The water jet cutting apparatus of claim <sup>13</sup>14 wherein the first and second [sprockets] pulleys located at each opposing end of the beam [which] are initially rotatable relative to each other for initial adjustments and are locked in place relative to each other during operation.

1917. (Amended) The water jet cutting apparatus of claim <sup>9</sup>10 wherein the water supply conduit has a first end connected to said cutter [cutting apparatus] and has a second end connected to a water supply fitting located adjacent an end of the beam, the water supply fitting having a spring clamp to compensate for hose shrinkage while maintaining a nominal tension on the hose.

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*a7*  
1921. (Amended) A web cutting apparatus for cutting a web in a papermaking machine, the apparatus comprising:

- at least one beam extending transversely across the [width of the] web;
- a first carriage mounted to the beam and movable along the beam;
- a cutter [cutting apparatus] mounted to the first carriage for cutting into the web as the first carriage moves along the beam;
- a flexible conduit connected to said cutter [cutting apparatus] to supply the cutter [cutting apparatus] with a cutting medium;
- first drive means for driving the first carriage along the beam;
- a second carriage mounted to the beam and moveable along the beam;
- a wheel rotatably mounted on the second carriage for movement therewith along the beam, the wheel adapted to have the [supply] flexible

conduit guided and stretched thereabout, the wheel supporting the flexible conduit as the second carriage moves along the beam; and,

second drive means for driving the second carriage along the beam, the second drive means being interdependent with the first drive means to move the second carriage along the beam at second speeds relative to the first speeds at which the first drive means moves the first carriage along the beam.

*a7*  
*Amended*  
*22* (Amended) The web cutting apparatus of claim *21*<sup>*19*</sup> wherein the first drive means moves the first carriage across the [width of the] beam at the first speeds that are twice the second speeds at which the second drive means moves the second carriage along the beam.

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*22*<sup>*24*</sup> (Amended) The web cutting apparatus of claim *21*<sup>*19*</sup> wherein:

at least one beam is a single beam construction;

the first drive means includes a first movable belt extending around the beam, the first carriage being attached to the first movable belt;

*a8*  
a pair of first drive transmission pulleys mounted at [the] opposing ends of the beam around which the first movable belt is driven;

the second drive means includes a second movable belt extending around the beam adjacent the first movable belt, the second carriage being attached to the second movable belt;

a pair of second drive transmission pulleys mounted at the opposing ends of the beam around which the second movable belt is driven, and the second drive pulleys each having a second circumference that is  $\frac{1}{2}$  [the] of a first circumference of each of the first drive pulleys; and,

a drive motor mounted to at least one of the opposing ends of the beam to drive a corresponding one of the first and second pulleys.

a 8 amended  
23 ~~25~~<sup>22</sup>. (Amended) The web cutting apparatus of claim ~~24~~<sup>22</sup> wherein each of the first and second pulleys [are toothed sprockets] located at each opposing end of the beam [and] are driven by a single drive shaft[, and the first and second movable belts are timing belts].

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a 9  
27<sup>23</sup>. (Amended) The web cutting apparatus of claim ~~25~~<sup>23</sup> wherein the first and second [sprockets] pulleys located at each end of the beam are initially rotatable relative to each other for initial adjustments and are locked in place relative to each other during operation.

28<sup>19</sup>. (Amended) The web cutting apparatus of claim ~~24~~<sup>19</sup> wherein the flexible [supply] conduit has a first end connected to said cutter [cutting apparatus] and has a second end connected to a supply fitting located adjacent [an] one of the opposing ends of the beam, the supply fitting having a spring clamp to compensate for hose shrinkage while maintaining a nominal tension on the hose.

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a 10  
230<sup>19</sup>. (Amended) The web cutting apparatus of claim ~~21~~<sup>19</sup> wherein the [supply] flexible conduit is looped around the wheel by 180 degrees.

231<sup>9</sup>. (Amended) The web jet cutting apparatus of claim ~~10~~<sup>9</sup> wherein the [supply] flexible conduit is looped around the wheel by 180 degrees.

232. (Amended) The web jet cutting apparatus of claim 1 wherein the [supply] flexible conduit is looped around the wheel by 180 degrees.

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In the Drawings:

Permission is hereby requested to replace the four sheets of drawings on file bearing Figures 1 to 8 of the drawings on file with the new set of formal drawings submitted herewith bearing Figures 1 to 8

### **R E M A R K S**

Please find enclosed a certified copy of Applicant's corresponding Canadian patent application 2,260,290 filed January 25, 1999. The Applicant's claim to domestic priority under 35 U.S.C. § 119 is now believed to be complete. It is noted that the Examiner in the Office Action did not make reference to this claim for priority as set out in the declaration by the applicant. The Examiner is respectfully requested to acknowledge this request for priority.

New formal drawings for Figures 1 to 8 are submitted herewith to the Examiner and under a separate cover letter to the Official Draftsman. The drawings are believed to overcome the informalities objections raised to the drawings as filed. In Figures 5 and 6, the numeral is correctly identified as 36. In Figure 4, number 26 was replaced by number 62. Entry of the formal set of drawings submitted herewith is respectfully requested.

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